DOCKET NO.: 201587US2/hc

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

Arnaud GUEGUEN

SERIAL NO: 09/756,778      GROUP: 2133

FILED:    January 10, 2001      EXAMINER: JOSEPH D. TORRES

FOR:      DIGITAL TRANSMISSION METHOD OF THE ERROR-CORRECTING
CODING TYPE

**LETTER**

Mail Stop DD
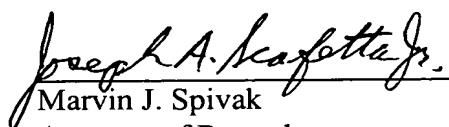Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is a People's Republic of China Office Action for the Examiner's consideration. The reference(s) cited therein have been previously filed on May 2, 2001.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Marvin J. Spivak
Attorney of Record
Registration No.: 24,913
Joseph A. Scafetta, Jr.
Registration No. 26,803

**22850**
Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 05/03)

DOCUMENT5

CPEL0053

## Patent Office of the People's Republic of China

| Applicant | MITSUBISHI DENKI KABUSHIKI KAISHA | | Seal of Examiner | Date of Issue |
|---|---|---|---|---|
| Agent | China Patent Agent (H.K.) Ltd. | | | May 9, 2003 |
| Patent Application No. | 01111390.1 | **Application Date** January 20, 2001 | **Exam Dept.** | |
| Title of Invention | TITLE DIGITAL TRANSMISSION METHOD OF THE ERROR-CORRECTING CODING TYPE | | | |

RECEIVED

AUG 2 2 2003

## *First Office Action*

Technology Center 2100

1.☑ Pursuant to the provision of Article 35 (1) of the Chinese Patent Law, the examiner made an examination as to substance of the captioned patent application for invention upon the request for substantive examination filed by the applicant.

☐ Pursuant to the provision of Article 35 (2) of the Chinese Patent Law, the Chinese Patent Office has decided to conduct on its own initiative an examination as to substance of the captioned patent application for invention.

2.☑ The applicant requests taking the filing date, <u>January 21, 2000</u>, at the <u>FR</u> Patent Office, the filing date, _____, at the _____ Patent Office, the filing date, _____, at the _____ Patent Office as the priority date of the present application.

☑ A copy of the first filed patent application certified by the receiving organ of the initial country of filing has been submitted by the applicant.

☐ A copy of the first filed patent application certified by the receiving organ of the initial country of filing has not been submitted by the applicant. Pursuant to the provision of Article 30 of the Chinese Patent Law, no priority right shall be deemed to have been claimed.

3.☐ The applicant filed amended application document(s) on _____ _____ and _____.

☐ Examination has confirmed that _____ filed on _____ cannot be accepted, _____ filed on _____ cannot be accepted, as the above amendment(s) ☐ is/are not in conformity with the provision of Article 33 of the Chinese Patent Law.

☐ is/are not in conformity with the provision of Rule 51 of the Implementing Regulations of the Chinese Patent Law.

☐ For the specific reason that the amendment(s) cannot be accepted, see the text of the Office Action.

4.☑ The examination is conducted in the light of the original application document(s)
   □ The examination is conducted in the light of the following application document(s):
   in the original application documents submitted on the filing date:
   Claim(s) _____, page(s)_____ of the description, Figure(s) _____
   of the drawing(s); Claim(s) _____ , page(s) _____of the description,
   Figure(s) _____ submitted on _____; Claim(s) _____, page (s) ___
   of the description, Figure(s) _____ submitted on _____
   □ Abstract of the description submitted on _____.

5. □ The present Office Action has been prepared without a search having been
   conducted.
   ☑ The present Office Action has been prepared with a search having been
   conducted.
   ☑ The following reference document(s) is/are cited in this Office Action (its/their serial
   number(s) will, continue to be used throughout the examination procedure):

| No. | Number or Title of Document | Date of Publication (or filing date of interfering application) |
|---|---|---|
| 1 | FR2730370A1 | (Date) August 9, 1996 |
| 2 | WO9948237A1 | (Date) September 23, 1999 |
| 3 | | (Date) |
| 4 | | |
| 5 | | |
| 6 | | |

6. The concluding comments of the examiner are:
□ On the description:
   □ The content of the application comes within the scope where no patent right is
      granted as provided in Article 5 of the Patent Law.
   □ The description is not in conformity with the provision of Article 26(3) of the Patent
      Law.
   □ The drafting of the description is not in conformity with the provision of Rule 18 of the
      Implementing Regulations.
☑ On the claims:
   □ Claim comes within the scope where no patent right is granted as provided in Article
      25 of the Patent Law.
   □ Claim is not in conformity with the definition of invention in Rule 2(1) of the
      Implementing Regulations.
   □ Claim _____ does not possess novelty as provided in Article 22(2) of the Patent
      Law.
   ☑ Claim ___1-23____ does not possess inventiveness as provided in Article 22(3) of the
      Patent Law.
   □ Claim _____ does not possess practical applicability as provided in Article 22(4) of
      the Patent Law.
   □ Claim _____ is not in conformity with the provision of Article 26(4) of the Patent
      Law.
   □ Claim _____ is not in conformity with the provision of Article 31(1) of the Patent

Law.

☐ Claim _____ is not in conformity with the provisions of Rules 20-23 of the Implementing Regulations.

☐ Claim _____ is not in conformity with the provision of Article 9 of the Patent Law.

☐ Claim _____ is not in conformity of the provision of Rule 12(1) of the Implementing Regulations.

For specific analyses of the above concluding comments, see the text of this Office Action.

7. In view of the above concluding comments, the examiner holds that:

☐ The applicant should amend the application document in accordance with the requirements raised in the text of this Office Action. The amended document(s) should be submitted in duplicate and should conform to the provisions of Article 33 of the Patent Law and Rule 51 of the Implementing Regulations of the Chinese Patent Law.

☐ The applicant should expound in his Observations the reasons why the captioned patent application is patentable and amend the places not conforming to regulations as pointed out in the text of the Office Action, otherwise it would be impossible for the patent right to be granted.

☑ The captioned patent application contains no substantive content for which the patent right may be granted, thus if the applicant has not advanced his reasons or has not done so adequately, the application will be rejected.

8. The applicant should pay attention to the following matters:

   (1) In accordance with the provision of Article 37 of the Patent Law, the applicant should submit his/its Observations within **four** months from the date of receipt of this Office Action; if, without any justified reason, the time limit for making response is not met, the application will be deemed to have been withdrawn.

   (2) The amendments made by the applicant to his application should conform to the provision of Article 33 of the Patent Law, the amended text should be in duplicate and the format should conform to the relevant provisions of the Guidelines for Examination.

   (3) The applicant' s Observations or amended text should be mailed or presented to the Receiving Section of the Chinese Patent Office. Document no mailed or presented to the Acceptance Section have no legal force.

   (4) Without making an appointment, the applicant and/or agent may not come to the Chinese Patent Office to hold an interview with the examiner.

9. This Office Action consists of the text portion totalling ___5___ page(s) and of the following annex(es):

☑ ___2___ duplicate copies of the reference document(s) cited totalling ___15___ page(s).

☐

☐

## Text of the First Office Action

The following defects still exist with the present application:

1. Independent claim 1 lacks inventiveness:

Claim 1 seeks to protect a "digital transmission method of the error-correcting coding type". Reference document 1 (FR2730370A1) discloses "dispositif de reception de signaux numeriques a structure iterative, module et procede correspondants", and especially discloses the following technical features in Fig. 4 and 5 and between line 16, page 13 and line 24, page 17 of the description: including a detector 41 of symbols with weighted outputs produces an estimation An, 1 of the corresponding transmitted symbol; the symbols An, 1 at output of the detector 41 are de-interleaved (42) to give the symbols Ak, 1; the de-interleaved symbols Ak, 1 are presented to the input of a convolutive decoder 43 which gives a new estimation Ak, 2 of symbols Ak; at output of the decoder 43, there is defined (44) a correction data element Zk called an extrinsic data element obtained from the estimations Ak, 1 and Ak, 2; the correction data element Zk is then used, after a re-interleaving operation 45, in the detector 41. The steps carried out when processing signals by the device in reference document 1 correspond to the structure of its means. Thus, the "correction data element Zk" stated in reference document 1 expresses the same information as the "characteristic quantity" in claim 1. As a result, reference document 1 has disclosed most of the content of claim 1.

Claim 1 is different from reference document 1 in that: 1) said transmission method includes "coding procedure"; 2) claim 1 also includes the "decoded information quality parameter determination step".

Distinguishing feature 1 is commonly known to those ordinarily skilled in the art. In the prior art, it is a common practice to adopt interleaving step when encoding signal train. Distinguishing feature 2 has been disclosed in Fig. 3 – 4 and the claims of reference document 2 (WO9948237A1): determining the value for the quality of the detected data sequence, and if the quality of the detected data sequence fulfils the quality requirement, estimating the bit error ratio by comparing the detected data sequence with the data sequence re-encoded using the first encoding. Said value for the quality expresses the same information as the "information quality parameter" in claim 1. They are both values acquired by estimating the quality according to the information obtained from the preceding decoding process. Reference documents 1 and 2 both belong to the channel transmission field and both relate to the estimation of error ratio. Therefore, it is obvious to combine the technical features stated in reference documents 1 and 2 with the common knowledge to acquire the technical solution of claim 1. As a result, claim 1 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision of Article 22, para. three, of the Patent Law on inventiveness.

2.  Dependent claim 2 lacks inventiveness:

The technical feature in the characterizing portion of claim 2 is "said decoded information quality parameter is used after the said decoding procedure". Reference document 2 discloses "the value for the quality

of the detected data sequence is determined by decoding a second encoding of the detected data sequence decoded from the first encoding". Thus, this procedure also determines the value for the quality after the second decoding, i.e. after the decoding procedure. This is identical with the technical feature in the characterizing portion of claim 2. When claim 1, which is being referred to, is not acceptable due to the lack of inventiveness, claim 2 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

3.  Dependent claim 3 lacks inventiveness:

The technical feature in the characterizing portion of claim 3 is "said decoded information quality parameter is used during the said decoding procedure". When claim 1 of reference document 2 states "determining the value for the quality of the detected data sequence", it does not define whether said value is used during or after the decoding procedure. However, according to its dependent claim three's statement of using the value after the decoding procedure, no creative work will be involved for those ordinarily skilled in the art to think of using said value during the decoding procedure. In other words, it is obvious to acquire the technical feature in the characterizing portion of claim 3 from reference document 2. When claim 1, which is being referred to, is not acceptable due to the lack of inventiveness, claim 3 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

4.  Dependent claim 4 lacks inventiveness:

"Each of the said elementary decoding steps uses ... being transmitted to another iteration", the technical feature in the characterizing portion of claim 4, is disclosed in reference document 1 (see comment 1), while the feature "said characteristic quantity determination step (86) calculating ... at the output of the said elementary decoding step (83)" can be obtained from the disclosure of reference document 2 without any creative work involved (see comment 3). When the claim it refers to is not acceptable due to the lack of inventiveness, claim 4 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

5. Dependent claims 5, 8 and 11 – 23 fail to make references properly:

Claim 5 is a multiple dependent claim, but it refers to the preceding multiple dependent claim 4, so is not in conformity with the provision of Rule 23, para. two, of the Implementing Regulations of the Patent Law.

Even if the applicant rectifies said defects, claims 5 – 23 still have the following defects concerning the inventiveness:

1. Dependent claims 5 – 7 lack inventiveness:

The technical feature in the characterizing portion of claim 5 is "said characteristic quantity is a statistical quantity". However, this technical feature is commonly known in the art. As compared with the prior art, it does not bring about any unexpected technical effect. In other words, the value of said quantity does not cause notable progress in the prior art. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 5 neither has prominent

substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

Claims 6 and 7 have the same defect, so are not in conformity with the provision of Article 22, para. three, of the Patent Law.

2. Dependent claim 8 lacks inventiveness:

As for the technical feature in the characterizing portion of claim 8, the claim 1 of reference document 2 states that the procedure of determining the value for the quality is carried out according to the data from the first decoding. According to reference documents 1 and 2, it does not involve any creative work for those ordinarily skilled in the art to apply this determining step to the correction data, the signal having a weighted value received and the signal having a weighted value acquired by the first decoding to determine the value for the quality. In other words, it is obvious to acquire the claimed technical solution of claim 8 by combining reference documents 1 and 2 with the common knowledge. Therefore, claim 8 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision of Article 22, para. three, of the Patent Law on inventiveness.

3. Dependent claims 9 and 10 lack inventiveness:

The technical feature in the characterizing portion of claim 9 is "the said quality parameter determination step determines the said quality parameter from characteristic quantities calculated during elementary decoding steps corresponding to the last elementary decoding steps in the said decoding procedure". This feature is basically identical with

the content of claim 3. Regarding the prior art, the number of "characteristic quantities" does not bring about any unexpected technical effect. Therefore, it is obvious to those ordinarily skilled in the art to acquire the technical feature in the characterizing portion of claim 9 according to the disclosure of reference document 2. When claim 8, which is being referred to, is not acceptable due to the lack of inventiveness, claim 9 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law. Please see comment 3 for details.

The technical feature in the characterizing portion of claim 10 is "single characteristic quantity". As far as the prior art is concerned, the change in number does not bring about any unexpected technical effect, while the other features can be obtained without any creative work involved according to the disclosure of reference document 2. When claim 8, which is being referred to, is not acceptable due to the lack of inventiveness, claim 10 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law. Please see comment 3 for details.

4. Dependent claims 11 and 12 lack inventiveness:

"said output information quality parameter is representing ..." and "said output information quality parameter is used as ...", the technical features in the characterizing portions of claims 11 and 12, both define the use of the quality parameter. To the prior art, they contribute nothing. When the claims they refer to are not acceptable due to the lack of inventiveness, claims 11 and 12 neither have prominent substantive feature nor represent notable progress, and are

not in conformity with the provision Article 22, para. three, of the Patent Law. Please see comment 3 for details.

5. Dependent claims 13 – 15 lack inventiveness:

All the technical features in the characterizing portions of claims 13 – 15 are definitions of the use of "configuration parameter". As far as the prior art is concerned, such definitions fail to produce any unexpected technical effect. When the claims they refer to are not acceptable due to the lack of inventiveness, claims 13 – 15 neither have prominent substantive feature nor represent notable progress, and are not in conformity with the provision Article 22, para. three, of the Patent Law.

6. Dependent claims 16 and 17 lack inventiveness:

The technical feature in the characterizing portion of claim 16 actually cyclically processes the information quality parameter as a function and this technical feature is a common practice to those ordinarily skilled in the art. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 16 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

Claim 17 has the same defect, so is not in conformity with the provision of Article 22, para. three, of the Patent Law.

7. Dependent claims 18 and 19 lack inventiveness:

The technical feature in the characterizing portion of claim 18 is "the

said received information being processed by means of N-bit decoding sequences, the said set of decoded information items is a sequence of binary information items containing N symbols". Although reference documents 1 and 2 do not mention if the received information is N-bit and if the symbol is binary, to those ordinarily skilled in the art, it is a piece of common knowledge that the information sequence is binary information. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 18 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

Claim 19 has the same defect, so is not in conformity with the provision of Article 22, para. three, of the Patent Law.

8. Dependent claim 20 lacks inventiveness:

The technical feature in the characterizing portion of claim 20 is "said elementary decoding steps have inputs and outputs weighted in terms of probabilities, likelihood ratios, or log likelihood ratios", but this is commonly known in the art. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 20 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

9. Dependent claim 21 lacks inventiveness:

The technical feature in the characterizing portion of claim 21 is "said coding procedure comprises at least one puncturing step and the said decoding procedure comprises at least one corresponding de-

puncturing step", but this is a common practice in the art for separating encoded/decoded data. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 21 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.

10. Dependent claim 22 lacks inventiveness:

The technical feature in the characterizing portion of claim 22 is "in a combination of transmission methods using a number of decoding procedures associated with one and the same coding procedure, decoded information quality parameters obtained respectively at the end of each of the decoding procedures form weighting factors for the corresponding sets of decoded information items". As far as the prior art is concerned, this does not produce any unexpected technical effect. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 22 neither has prominent substantive feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.
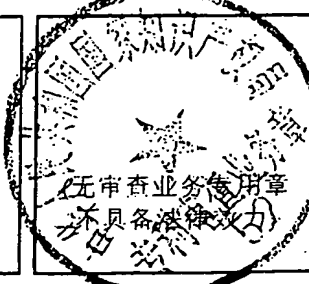
11. Dependent claim 23 lacks inventiveness:

"In a transmission method comprising, furthermore, a joint detection step", the technical feature in the characterizing portion of claim 23, has been disclosed in claim 1 of reference document 2. When the decoding procedure stated in reference document 1 performs cyclic processing, it is a common practice in the art to use the obtained "information quality parameter" as a parameter for the next cyclic procedure. When the claim it refers to is not acceptable due to the lack of inventiveness, claim 23 neither has prominent substantive

feature nor represents notable progress, and is not in conformity with the provision Article 22, para. three, of the Patent Law.
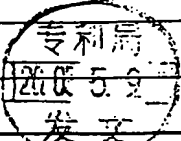
For the above reasons, claims 1 – 23 are not acceptable due to the lack of inventiveness. Besides, the description does not carry any other substantive content eligible for a patent right, either. Even if the applicant recombines and/or further defines the claims according to the description, the application still does not have the prospect of being granted the patent right. If the applicant fails to produce convincing reasons regarding the inventiveness of the present application within four months as fixed in this office action, the present application will be rejected.

# 中华人民共和国国家知识产权局

<table>
<tr>
<td colspan="2">邮政编码：<br><br>香港湾仔港湾道 23 号鹰君中心 22 字楼<br><br>中国专利代理(香港)有限公司<br><br>程天正，陈景峻</td>
<td></td>
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</table>

| 申 请 号： | 01111390.1 | 部门及通知书类型： | 3--D | 发文日期： | |
| --- | --- | --- | --- | --- | --- |
| 申 请 人： | | 三菱电机株式会社 | | | |
| 发明名称： | | 纠错编码型的数字传输方法 | | | |

## 第一次审查意见通知书

00 53799

1. ☒ 申请人提出了实审请求，根据专利法第 35 条第 1 款的规定，审查员对上述发明专利申请进行实质审查。

   ☐ 根据专利法第 35 条第 2 款的规定，国家知识产权局决定自行对上述发明专利申请进行审查。

2. ☒ 申请人要求以其在：

   | FR | 专利局的申请日 | 2000 年 1 月 21 日 | 为优先权日， |
   | --- | --- | --- | --- |
   | | 专利局的申请日 | | 为优先权日， |
   | | 专利局的申请日 | | 为优先权日， |
   | | 专利局的申请日 | | 为优先权日， |
   | | 专利局的申请日 | | 为优先权日， |

   ☒ 申请人已经提交了经原申请国受理机关证明的第一次提出的在先申请文件的副本。

   ☐ 申请人尚未提交经原申请国受理机关证明的第一次提出的在先申请文件的副本，根据专利法第 30 条的规定视为
      未提出优先权要求。

3. ☐ 申请人于___年_月_日和___年_月_日提交了修改文件。

   经审查，其中：___年_月_日提交的___不能被接受；___年_月_日提交的___不能被接受；

   因为上述修改 ☐ 不符合专利法第 33 条的规定。 ☐ 不符合实施细则第 51 条的规定。

   修改不能被接受的具体理由见通知书正文部分。

4. ☒ 审查是针对原始申请文件进行的。

   ☐ 审查是针对下述申请文件进行的：

   | 说明书 | 申请日提交的原始申请文件的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页； |
   | --- | --- |
   | 权利要求 | 申请日提交的原始申请文件的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页； |
   | 附图 | 申请日提交的原始申请文件的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页；<br>___年_月_日提交的第____页；___年_月_日提交的第____页； |
   | 说明书摘要 | ☐ 申请日提交的； ☐ ___年_月_日提交的； |
   | 摘要附图 | ☐ 申请日提交的； ☐ ___年_月_日提交的； |

京办完成

2 4 SEP 2003

5. ☐ 本通知书是在未进行检索的情况下作出的。

   ☒ 本通知书是在进行了检索的情况下作出的。

   ☒ 本通知书引用下述对比文献(其编号在今后的审查过程中继续沿用):

| 编号 | 文 件 号 或 名 称 | 公 开 日 期<br>(或抵触申请的申请日) |
|---|---|---|
| 1 | FR2730370A1 | 1996 年 8 月 9 日 |
| 2 | WO9948237A1 | 1999 年 9 月 23 日 |
| 3 | | 年 月 日 |
| 4 | | 年 月 日 |

6. 审查的结论性意见:

   ☐ 关于说明书:

   　　☐ 申请的内容属于专利法第 5 条规定的不授予专利权的范围。

   　　☐ 说明书不符合专利法第 26 条第 3 款的规定。

   　　☐ 说明书的撰写不符合实施细则第 18 条的规定。

   ☒ 关于权利要求书:

   　　☐ 权利要求＿＿＿不具备专利法第 22 条第 2 款规定的新颖性。

   　　☒ 权利要求 1-23 不具备专利法第 22 条第 3 款规定的创造性。

   　　☐ 权利要求＿＿＿不具备专利法第 22 条第 4 款规定的实用性。

   　　☐ 权利要求＿＿＿属于专利法第 25 条规定的不授予专利权的范围。

   　　☐ 权利要求＿＿＿不符合专利法第 26 条第 4 款的规定。

   　　☐ 权利要求＿＿＿不符合专利法第 31 条第 1 款的规定。

   　　☐ 权利要求＿＿＿不符合实施细则第 2 条第 1 款关于发明的定义。

   　　☐ 权利要求＿＿＿不符合实施细则第 13 条第 1 款的规定。

   　　☐ 权利要求＿＿＿不符合实施细则第 20 条至第 23 条的规定。

   　　☐

   上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见,审查员认为:

   ☐ 申请人应按照通知书正文部分提出的要求,对申请文件进行修改。

   ☐ 申请人应在意见陈述书中论述其专利申请可以被授予专利权的理由,并对通知书正文部分中指出的不符合
   　　规定之处进行修改,否则将不能授予专利权。

   ☒ 专利申请中没有可以被授予专利权的实质性内容,如果申请人没有陈述理由或者陈述理由不充分,其申
   　　请将被驳回。

   ☐

8. 申请人应注意下述事项:

   (1) 根据专利法第 37 条的规定,申请人应在收到本通知书之日起的 肆 个月内陈述意见,如果申请人
   　　无正当理由逾期不答复,其申请将被视为撤回。

   (2) 申请人对其申请的修改应符合专利法第 33 条的规定,修改文本应一式两份,其格式应符合审查指南
   　　的有关规定。

   (3) 申请人的意见陈述书和/或修改文本应邮寄或递交给国家知识产权局专利局受理处,凡未邮寄或递交
   　　给受理处的文件不具备法律效力。

   (4) 未经预约,申请人和/或代理人不得前来国家知识产权局专利局与审查员举行会晤。

9. 本通知书正文部分共有 5 页,并附有下述附件:

   ☒ 引用的对比文件的复印件共 2 份 15 页。

   ☐

# 第一次审查意见通知书正文

经审查，当前文本存在如下缺陷：

1. 独立权利要求 1 缺乏创造性：

当前权利要求 1 谋求保护一种"纠错编码型的数字传输方法"。对比文件 1（FR2730370A1）公开了一种用于接收由对源数字数据进行卷积编码而产生的数字序列的设备，尤其是说明书第 13 页第 16 行至第 17 页第 24 行、图 4 和 5 具体公开了如下技术特征：包括一个解码器 41，用于解码带有加权值的信号并产生相应于发送信号的估计值 $A_{n,1}$；去交错器 42，用于接收该解码器 41 的输出信号 $A_{n,1}$ 并产生信号 $A_{k,1}$；一卷积解码器 43，用于接收去交错的信号 $A_{k,1}$ 并产生一个新的估计值 $A_{k,2}$；在解码器 43 的输出位置由一确定装置 44 根据估计值 $A_{k,1}$ 和 $A_{k,2}$ 来得到一个交错非本质数据的纠错数据 $Z_k$；再交错装置 45 接收该纠错数据 $Z_k$，并将结果传送到解码器 41。对比文件 1 所述设备在进行信号处理时所执行的步骤是与其装置结构相对应的。可见，对比文件 1 中所述的"纠错数据 $Z_k$"与当前权利要求 1 中所述"特征数值"表示的信息是相同的。由此可见，对比文件1公开了当前权利要求 1 所述的大部分内容。

对比文件 1 与当前权利要求 1 的区别在于：①该传输方法包括"编码过程"。②当前权利要求 1 还包括"解码信息质量参数确定步骤"。

对于区别技术特征①，对于本领域技术人员来说是公知常识。在现有技术中，对信号序列进行编码时采用交错步骤，是本领域的常用手段；对于区别技术特征②，在对比文件 2（WO9948237A1）的权利要求书和附图 3、4 中已经公开：确定所检测数据序列的质量的值，以及如果所检测数据序列的质量满足质量要求，则通过讲所检测数据序列与利用第一编码所重新编码的数据序列相比较来估算比特误码率。该质量的值与当前权利要求 1 中所述"信息质量参数"表示的信息是相同的，都是根据前面的解码步骤所的信息对质量进行估算而得到的值。由于对比文件 1 和 2 均属于信道传输领域，且均涉及误码率的估算，因此，将对比文件 1、2 所述技术特征和公知常识相结合从而得到当前权利要求 1 所述技术方案是显而易见的，因此，当前权利要求 1 不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款有关创造性的规定。

2. 从属权利要求 2 缺乏创造性：

当前权利要求 2 限定部分的技术特征为："所述解码过程之后使用所述解码信息质量参数"。对比文件 2 中公开了"通过对所检测道德从第一编码所解码的数据序列的第二编码进行解码，来确定所检测的数据序列的质量的值"，可见这一过程也是在第二次解码之后即解码过程之后来确定质量的值，与当前权利要求 2 限定部分的技术特征是相同的。因此，当其所引权利要求 1 因缺乏创造性而不能被接受时，当前权利要求 2 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

3. 从属权利要求 3 缺乏创造性：

当前权利要求 2 限定部分的技术特征为"在所述解码过程期间使用所述解码信息质量参数"。对比文件 2 的权利要求 1 中记载"确定所检测数据序列的质量的值"时，尽管没有记载是在解码过程中还是解码过程以后使用，但是根据其从属权利要求 3 所述可以在解码过程后使用，那么本领域技术人员由此得出在解码期间使用该值是不需要花费创造性劳动就可以想到的，即从对比文件 2 得出当前权利要求 3 限定部分的技术特征是显而易见的。因此，当其所引权利要求 1 因缺乏创造性而不能被接受时，当前权利要求 3 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

4. 从属权利要求 4 缺乏创造性：

当前权利要求 4 限定部分的技术特征"每个所述的基本解码步骤使用部分……被传送到另一次迭代"在对比文件 1 中已经公开（如上第 1 条所述）；而"所述特征数据确定步骤在……计算所述至少一个特征数值"根据对比文件 2 中所述记载可以不花费创造就可以得到（如上第 3 条所述），因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 4 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

5. 从属权利要求 5、8、11-23 引用不当：

当前权利要求 5 是一项多项从属权利要求，它引用了在前多项从属权利要求 4，不符合专利法实施细则第 23 条第 2 款的规定。

为加快审查，审查员认为即使申请人克服此缺陷，当前权利要求 5-23 还存在缺乏创造性的缺陷：

1. 从属权利要求 5-7 缺乏创造性：

当前权利要求 5 限定部分的技术特征为"所述特征数值是统计数值"，这一技术

特征是本领域的普通常识，对现有技术而言，并没有带来预料不到的技术效果，即该数值的取值并没有使得现有技术具有显著的进步，因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 5 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

当前权利要求 6、7 也存在类似缺陷，不符合专利法第 22 条第 3 款的规定。

2. 从属权利要求 8 缺乏创造性：

对于当前权利要求 8 限定部分的技术特征，对比文件 2 的权利要求 1 中记载的确定质量值的步骤是根据第一解码出的数据来进行确定的，本领域技术人员根据对比文件 1 和 2，将这一确定步骤用于第一解码得到的带有加权值的信号、所接收到的带有加权值的信号和纠错数据来确定质量的值是不需要花费创造性劳动就可以做到的，即由对比文件 1、2 结合公知常识得到当前权利要求 8 所谋求保护的技术方案是显而易见的，因此，当前权利要求 8 不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款有关创造性的规定。

3. 从属权利要求 9、10 缺乏创造性：

当前权利要求 9 限定部分的技术特征为"所述质量参数确定步骤根据与所述解码过程中的最后基本解码步骤对应的基本解码步骤期间计算的多个特征数值来确定所述质量参数"，这一点实质上与当前权利要求 3 所述内容是基本上相同的，而对于现有技术而言，"特征数值"的数量并没有产生预料不到的技术效果，因此，本领域技术人员根据对比文件 2 所记载的内容得出当前权利要求 9 限定部分的技术特征是显而易见的。因此，当其所引权利要求 8 因缺乏创造性而不能被接受时，当前权利要求 9 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。具体评述参见上述第 3 条。

当前权利要求 10 限定部分的技术特征中记载了"单个特征数值"，对于现有技术而言数量上的变化并没有产生预料不到的技术效果，而其余特征根据对比文件 2 所记载的内容是不需要花费创造性劳动就可以得到的，因此，当其所引权利要求 8 因缺乏创造性而不能被接受时，当前权利要求 10 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

4. 从属权利要求 11、12 缺乏创造性：

当前权利要求 11、12 限定部分的技术特征"所述输出信息质量参数是表示……"、"所述输出信息质量参数是用作……"均是对质量参数的用途的描述，对于现有技术

而言，并没有做出任何贡献，因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 11、12 均不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

5. 从属权利要求 13-15 缺乏创造性：

当前权利要求 13-15 限定部分的技术特征均是对"配置参数"的用途的描述，对现有技术而言，这种限定并没有产生预料不到的技术效果，因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 1-15 均不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

6. 从属权利要求 16、17 缺乏创造性：

当前权利要求 16 限定部分的技术特征实质上是将信息质量参数作为函数进行循环处理，这一技术特征对于本领域技术人员来说是常用手段。因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 16 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

当前权利要求 17 也存在类似缺陷，不符合专利法第 22 条第 3 款的规定。

7. 从属权利要求 18、19 缺乏创造性：

当前权利要求 18 限定部分的技术特征为"通过 N 比特解码序列处理所述接收信息 50，并且所述的解码信息项组是包含 N 个码元的一系列二进制信息项"。虽然在对比文件 1、2 中没有提及接收信息是否为 N 比特、码元是否为二进制，但对于本领域技术人员来说，所述信息序列是二进制信息是本领域的普通常识。因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 18 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

当前权利要求 19 也存在类似缺陷，不符合专利法第 22 条第 3 款的规定。

8. 从属权利要求 20 缺乏创造性：

当前权利要求 20 限定部分的技术特征为"所述基本解码步骤具有根据概率、似然比、或对数似然比加权的输入和输出"，这是本领域的普通常识。因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 20 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

9. 从属权利要求 21 缺乏创造性：

当前权利要求 21 限定部分的技术特征为"所述编码过程还包括至少一个穿孔步骤，并且所述解码过程包括至少一个对应的去穿孔步骤"，这是本领域中用于分离编、

解码数据时的常用手段。因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 21 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

10. 从属权利要求 22 缺乏创造性：

当前权利要求 22 限定部分的技术特征为："使用与同一编码过程相关联的多个解码过程的传输组合方法中，在每个解码过程结束时分别获得的解码信息质量参数形成对应的解码信息项组的加权系数"，这对于现有技术而言，并没有产生预料不到的技术效果，因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 22 均不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

11. 从属权利要求 23 缺乏创造性：

当前权利要求 23 限定部分的技术特征"在传输方法中还包括联合检测步骤"在对比文件 2 的权利要求 1 中已经公开，而当对比文件 1 所述解码过程进行循环处理时，所得到的"信息质量参数"用作下一次循环过程的一个参数是本领域的常用手段。因此，当其所引权利要求因缺乏创造性而不能被接受时，当前权利要求 23 也不具备突出的实质性特点和显著的进步，不符合专利法第 22 条第 3 款的规定。

基于以上评述，当前权利要求 1-23 均因不具备创造性而不能被接受，而且本申请的说明书中也没有记载其它任何可以获得专利权的实质性内容，因而即使对权利要求进行重新组合和/或根据说明书记载的内容作进一步的限定，本申请也不具备授予专利权的前景。如果申请人在答复限期内不能提出具有说服力的理由来说明其权利要求具有创造性，则本申请将被驳回。

电学部电路处　　韩燕（SR3）
电话：62091833
2003 年 4 月 21 日